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| SERIAL NUMBER | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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08/688,622 07/30/96 PAPAMOSCHOU

D UC044.001DV1

EXAMINER

34M1/0505

DANIEL E ALTMAN
KNOBBE MARTENS OLSON & BEAR
620 NEWPORT CENTER DRIVE
SIXTEENTH FLOOR
NEWPORT BEACH CA 92660

CASE REG. NO. PAPER NUMBER

3403

DATE MAILED: 05/05/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 3/31/97 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 17-31 are pending in the application.

Of the above, claims 20, 21, 24, 26, 28, 29, 31 are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 19, 22, 23, 25, 27, 30 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

Election

Applicant's election of the species comprising the engine system of Figure 1 and the exhaust configuration of Figure 7A is acknowledged. Applicant has listed claims 19-23, 25, 27, and 30 as readable on this species. It is submitted however that claims 20 and 21 do not in fact read on the elected species. Claim 20 requires that first and second exhaust streams pass through the same combustor before separating. This arrangement differs from the elected engine of Figure 1 in which first and second streams 30 and 32 originate from separate sources and pass through separate, parallel combustors 4 and 34. Claim 21 further states that the recited engine is a turbojet, whereas, the elected species of Figure 1 is a turbofan. Claims 20 and 21 are consequently withdrawn from consideration along with claims 24, 26, 28, 29, and 31 already excluded from applicants list. An action on the merits of elected claims 19, 22, 23, 25, 27, and 30 is set forth herein below.

Claim Rejections - 35 USC § 102

Claims 19, 22, 23, 25, 27, and 30 are rejected under 35 U.S.C. § 102(b) as anticipated by Wolf et al or Hazen et al.

The present claims are sufficiently broad to read on any turbofan engine, such as that of Wolf or Hazen, which includes a combustion chamber in its bypass duct. Attention is called to the turbofan engine in Wolf's drawing figure. Note combustors 38 and 54 respectively located in the core engine and bypass duct, and note also inner nozzle (partition) 44 which divides the engine exhaust into first and second streams. Attention is additionally called to Hazen's Figure 1 which shows a similar engine configuration comprising respective core and bypass combustors 14 and 65 along with partition 56 for dividing the exhaust into two streams.

It is further noted that the claims describe the two exhaust streams as having different temperatures and also state that the invention serves to prevent Mach waves (claim 19, lines 11-15). This material however merely constitutes an intended mode of operation and/or a desired result. The claimed heating and combustion apparatus comprises no specific structure that would render it capable of operating any differently than the prior art. Any pair of combustion systems could be made to operate at different temperatures by simply varying their respective fuel-air ratios. Furthermore, Wolf and Hazen each employ a bypass duct combustion system different from the corresponding core engine combustion system, which logically suggested that these systems do in fact operate at different temperatures.


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Art Unit: 3403

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Additional References

Jonker and Dusa are cited as disclosing further examples of turbofan engines with bypass combustion systems.

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April 30, 1997


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ART UNIT 343